

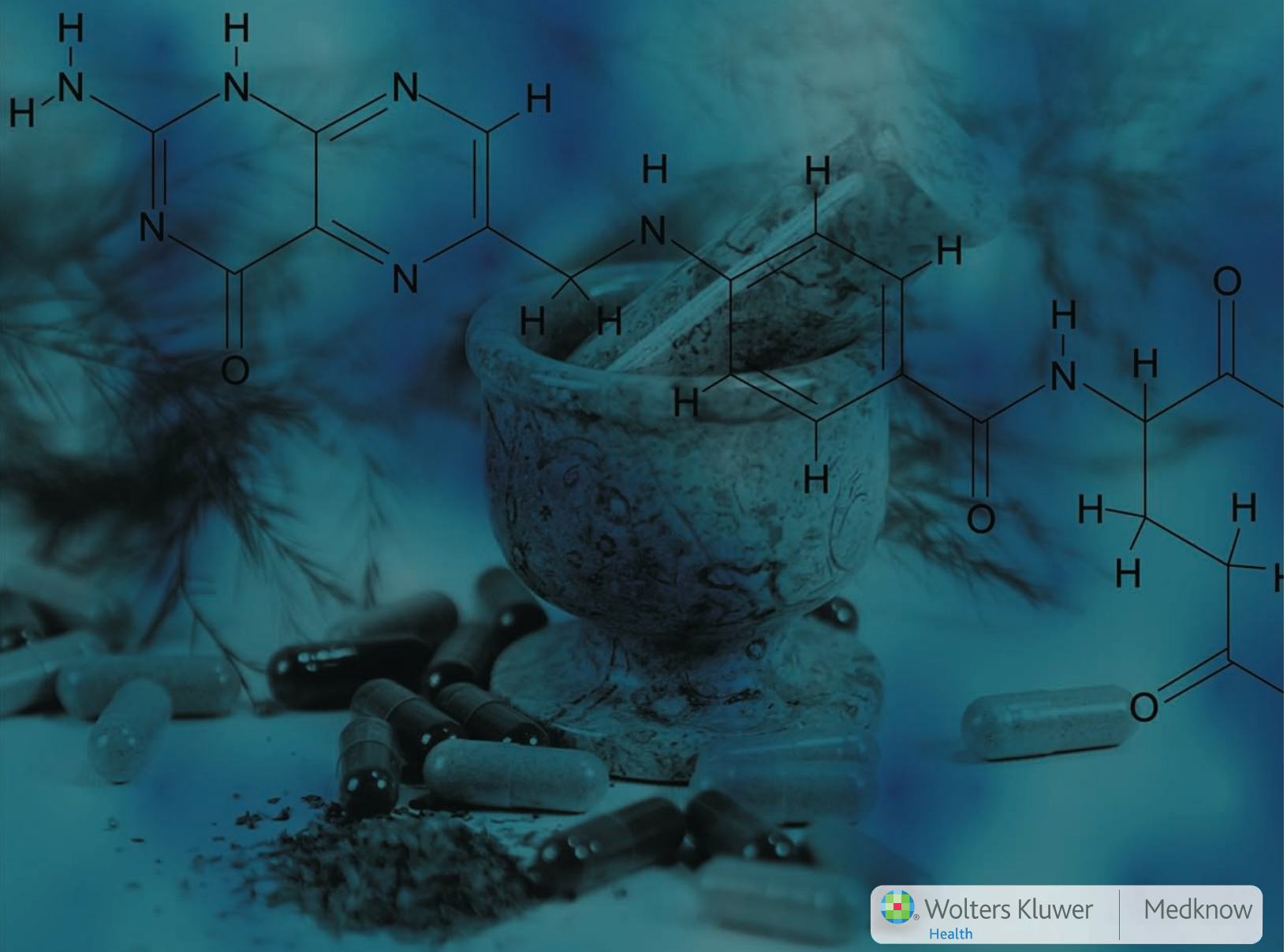
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## Original Article

### Factors effective on medication errors: A nursing view

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#### ABSTRACT

**Objective:** Medication errors are the most common medical errors, which may result in some complications for patients. This study was carried out to investigate what influence medication errors by nurses from their viewpoint.

**Methods:** In this descriptive study, 150 nurses who were working in Qazvin Medical University teaching hospitals were selected by proportional random sampling, and data were collected by means of a researcher-made questionnaire including demographic attributes (age, gender, working experience,...), and contributing factors in medication errors (in three categories including nurse-related, management-related, and environment-related factors).

**Findings:** The mean age of the participant nurses was  $30.7 \pm 6.5$  years. Most of them (87.1%) were female with a Bachelor of Sciences degree (86.7%) in nursing. The mean of their overtime working was  $64.8 \pm 38$  h/month. The results showed that the nurse-related factors are the most effective factors ( $55.44 \pm 9.14$ ) while the factors related to the management system ( $52.84 \pm 11.24$ ) and the ward environment ( $44.0 \pm 10.89$ ) are respectively less effective. The difference between these three groups was significant ( $P = 0.000$ ). In each aforementioned category, the most effective factor on medication error (ranked from the most effective to the least effective) were as follow: The nurse's inadequate attention (98.7%), the errors occurring in the transfer of medication orders from the patient's file to kardex (96.6%) and the ward's heavy workload (86.7%).

**Conclusion:** In this study nurse-related factors were the most effective factors on medication errors, but nurses are one of the members of health-care providing team, so their performance must be considered in the context of the health-care system like work force condition, rules and regulations, drug manufacturing that might impact nurses performance, so it could not be possible to prevent medication errors without paying attention to our health-care system in a holistic approach.

**Keywords:** Medication error; nurse; nursing workload

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## INTRODUCTION

Medication error is one of the most common medical errors.<sup>[1]</sup> Moreover, the medication error means a disorder in the treatment process, which is followed by a potential or actual risk of hazard for patient.<sup>[2]</sup>

Nowadays, medication errors have attracted more attention because of the complications like higher mortality rate and cost of health-care.<sup>[3]</sup> In the USA, the medication error-related deaths have been more than the deaths related to the car accidents, breast cancer and human immunodeficiency virus/acquired immune deficiency syndrome.<sup>[4]</sup> The first reports related to medication errors have been published since 1940 that attracted the authors' attention for preventing them.<sup>[5]</sup> A recent report by the Institute of Medicine estimated that the medication errors cause between 44,000-98,000 deaths each year in USA hospitals and it costs between \$6-29 billion to compensate for the adverse effects of such errors.<sup>[6]</sup> In general, the errors can be happened in different steps

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